A.D. 1867, *29th June.* N° 1899.

Corking and Securing Bottles.

LETTERS PATENT to Percy Smith, of the Firm of Stallard and Smith, Wine Merchants, of Philpot Lane, in the City of London, for the Invention of "IMPROVEMENTS IN CORKING, STOPPING, AND SECURING THE CONTENTS OF CHAMPAGNE AND OTHER BOTTLES."—A communication from abroad by Jeules Fisse and Gustave Thirion, of Reims, in the Empire of France.

Sealed the 24th December 1867, and dated the 29th June 1867.

PROVISIONAL SPECIFICATION left by the said Percy Smith at the Office of the Commissioners of Patents, with his Petition, on the 29th June 1867.

I, PERCY SMITH, of the Firm of Stallard and Smith, Wine Merchants, of Philpot Lane, in the City of London, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN CORKING, STOPPING, AND SECURING THE CONTENTS OF CHAMPAGNE AND OTHER BOTTLES," to be as follows:—

The first part of this Invention consists of a cap or cork cover of india-rubber or other suitable material placed over the cork and between it and the securing media for compensating for any porosity of the cork.

The second improvement consists of a ring or collar of india-rubber or other suitable material passed over the cork and round the neck of the bottle and under the cork cover before described; or this ring may be passed over the cork and rest upon the mouth of the bottle so as to prevent any of the contents from escaping between the cork and the bottle.

The third improvement consists of a metallic or other cap passed over the head of the cork and inclosing the same, so that the lower edge of the said cap either rests upon the bottle mouth and presses upon the stopping ring above described, or encloses the hollow mouth and compresses the stopping ring between the interior of the cap and the exterior of the neck of the bottle, the said cap being of metal or other non-porous material thus hermetically seals the cork.

The fourth improvement consists in the mode of securing the cap last described to the neck of the bottle; for this purpose a piece of wire is used doubled at about the centre of its length, and is thus formed into a long loop, the loop end is left plain a short length and then the two wires are twisted together, having two or more turns round each other, the two free ends of the wire are now passed round a mandril and brought and twisted together, again forming an eye between the latter and former twists; the wire is now ready for securing the cap, in the side of which there is an annular indentation, the eye is passed over the cap down to and is held in the said indentation when an extra twist of the free end of the wire will compress the eye and cause it to embrace firmly the said indented part of the cap; both the loop and the twisted portion of the wires on the side opposite to the loop are now turned downwards on opposite sides of the neck of the bottle; the free end of the wire wound round the same under the usual neck flange, one wire on the right side and the other on the left being passed through the loop, and back to their own side of the neck of the bottle, where these ends being passed across each other and being twisted together the fastening is complete.

Another mode of fastening the cap consists in forming it with side clips; the lower ends or claws are pressed into the side of the bottle neck under the flange, and bound by a binding wire or caused to maintain the required grip by the pressure of the cork upwards. The cap may be formed with these side claws, or the latter may be added thereto as an independent fastening, and as such be used for securing corks in lieu of caps or capsules when used with the cap herein-before described. A self-securing clip fastening, which I also propose to use, consists of two rigid pieces of strong steel or other wire, one of which I denominate the male and the other the female. The female is

formed somewhat in the shape of a staple, the two ends being turned up to form hooks to catch or take under the flange of the bottle neck, and the lower end of the male being also similarly formed; the loop of the staple or female part is bent over at an angle with the two legs, the head of the male is also bent over in like manner and terminates with a hook; this hook is passed into the loop of the staple, the angular or bent over portion of the male and female thus meet about the centre of the cork, the upward pressure of which causes the legs and clips to incline inwards to the neck of the bottle, and the greater the pressure exerted by the cork upwards the more firmly will the clips be pressed under the flange of the bottle neck, while to uncork the latter all that is necessary is simply a slight side pull of the male leg so as to release the clip from under the said flange, when the female clips will also become loose and set the cork free. In some cases the male limb may be made of sufficient length to pass down the side of and clip the bottom of the bottle. In other cases a short length of chain or a link may be attached to the male leg, to the free end of which chain or link (or side pull) a disc, tablet, or mark of any required shape or form may be added with the name of the firm, company, or individual using the same stamped, engraved, embossed, or otherwise indicated thereon, and this terminator may be made with a pointed or flattened end to act as a lever when inserted between the side of the bottle neck and the limb of the male clip, and thus instantaneously release the clip and set the cork free, as before described. With this form of fastener all wires or threads, strings, and the like may be entirely dispensed with, the said fastener can be formed with a metal cap, the latter being made in the shape of an inverted concave disc, having perforations in the sides or crown through which the limbs of the male and female are passed and then bent to the regular shape.

It will be readily understood from the foregoing description of the fastening that it may be employed repeatedly for securing a number of bottles as in detaching it and changing it from bottle to bottle it is unnecessary to break or injure it.

Another improvement consists of a piped stopper fitted with an inlet air duct and valve and tapped outlet; this stopper may be secured by being let into a suitable cork, or by being fitted with a screw; the air duct is fitted with a valve, so that the air can only enter the bottle as required.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Percy Smith in the Great Seal Patent Office on the 28th December 1867.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, PERCY SMITH, of the Firm of Stallard and Smith, Wine Merchants, of Philpot Lane, in the City of London, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-ninth day of June, in the year of our Lord One thousand eight hundred and sixty-seven, in the thirty-first year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Percy Smith, Her special licence, that I, the said Percy Smith, my executors, administrators, and assigns, or such others as I, the said Percy Smith, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time, and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN CORKING, STOPPING, AND SECURING THE CONTENTS OF CHAMPAGNE AND OTHER BOTTLES," a communication to him from abroad by Jules Fisse and Gustave Thirion, of Reims, in the Empire of France, upon the condition (amongst others) that I, the said Percy Smith, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Percy Smith, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof:—

The first improvement of this Invention consists of a cap or cork cover of india-rubber, or other suitable material, placed over the cork and between it and the securing media for compensating for any porosity of the cork.

The second improvement consists of a ring or collar of india-rubber or other suitable material passed over the cork and round the neck of the bottle and under the cork cover before described, or this ring may be passed

over the cork and rest upon the mouth of the bottle so as to prevent any of the contents from escaping between the cork and the bottle.

The third improvement consists of a metallic or other cap passed over the head of the cork and enclosing the same, so that the lower edge of the said cap either rests upon the bottle mouth or presses upon the stopping ring above described, or encloses the bottle mouth and compresses the stopping ring between the interior of the cap and the exterior of the neck of the bottle; the said cap being of metal or other non-porous material thus hermetically seals the cork.

The fourth improvement consists in the mode of securing the cap last described to the neck of the bottle. For this purpose a piece of wire is used doubled at about the centre of its length, and is thus formed into a long loop; the loop end is left plain a short length, and then the two wires are twisted together, having two or more turns round each other; the two free ends of the wire are now passed round a mandril and brought and twisted together again, forming an eye between the latter and former twists. The wire is now ready for securing the cap, in the side of which there is an annular indentation; the eye is passed over the cap down to and is held in the said indentation, when an extra twist of the free end of the wire will compress the eye and cause it to embrace firmly the said indented part of the cap; both the loop and the twisted portion of the wire on the side opposite to the loop are now to be turned downwards on opposite sides of the neck of the bottle, the free ends of the wire wound round the same under the usual neck flange, one wire on the right side and the other on the left being passed through the loop and back to their own side of the neck of the bottle, where their ends being passed across each other and twisted together the fastening is complete.

Another mode of fastening the cap consists in forming it with side clips, the lower ends or claws are pressed into the side of the bottle neck under the flange and bound by binding wire, or caused to maintain the required grip by the pressure of the cork upwards. The cap may be formed with these side claws or the latter may be added thereto as an independent fastening, and as such be used for securing corks in lieu of caps or capsules when used with the cap herein-after described. A self-securing clip fastening which I also propose to use, consists of two rigid pieces of strong steel or other wire, one of which I denominate the male and the other the female, the female is formed somewhat in the shape of a staple, the two ends being turned up to form hooks to catch or take under the flange of the bottle neck

and the lower end of the male being also similiarly formed the loop of the staple or female part is bent over at an angle with the two legs, the head of the male is also bent over in like manner and terminates with a hook, this hook passed into the loop of the staple, the angular or bent over portions of the male and female thus meet about the centre of the cork, the upward pressure of which causes the legs and clips to incline inwards to the neck of the bottle and the greater the pressure exerted by the cork upwards the more firmly will the clips be pressed under the flange of the bottle neck, while to uncork the bottle all that is necessary is simply a slight pull of the male leg, so as to release the clip from under the said flange, when the female clip will also become loosed and set the cork free. In some cases the male limb may be made of sufficient length to pass down the side of and clip the bottom of the bottle. In other cases a short length of chain or a hook may be attached to the male leg, to the free end of which chain or hook (or side pull) a disc, tablet, or mark of any required shape or form may be added with the name of the firm, company, or individual using the same, engrossed, stamped, embossed, or otherwise indicated thereon, and this terminator may be made with a pointer or flattened end to act as a lever when inserted between the side of the bottle neck and the limb of the male clip, and thus instantaneously release the clip and set the cork free as before described. With this form of fastener all wires, threads, string, and the like may be entirely dispensed with. The said fastener can be formed with a metal cap, the latter being made in the shape of an inverted concave disc, having perforations in the side or crown, through which the limbs of the male and female are passed and then bent to the required shape. It will be readily understood from the foregoing description of the fastening that it may be employed repeatedly for securing a number of bottles, as in detaching it and changing it from bottle to bottle it is unnecessary to break or injure it. I now proceed to describe the said improvements in further detail, reference being made to the accompanying Drawings to which the following explanation applies.

EXPLANATION OF THE DRAWINGS.

Drawing No. 1.—Figure 1 is a sectional elevation of the cap or cork cover which forms the subject of my first above-mentioned improvement.

Figure 2 is a plan of the ring or collar mentioned under the head of my second improvement.

Figure 3 is a transverse section shewing the metallic or other cap passed over the head of the cork, being my third improvement.

a is the cork; *b*, the cork cover; *c*, the ring or collar; *d*, the metallic or other cap; d^1, the wire binder, herein-after referred to; *e*, *e*, the bottle neck; *f*, *f*, a flange thereon.

Drawing No. 2.—Figures 1, 2, 3, 4, 5, and 6, are intended to illustrate the mode of securing the cork covers and cork, by means of a flexible wire binder the mode of forming which is shewn at Figure 6, (Figure 3 being a plan and Figures 4 and 5 transverse sections of the ring or collar similar to that shewn at Figure 2, Drawing 1). In this case the metallic cap *a* is formed with a bottom flange a^1 which rests upon the flange *f* on the neck of the bottle *c*, under which flange the binder *d* is secured.

The mode of using the binder, shewn at Figure 6, is as follows:—The eye C, is passed over the metallic cap until it embraces the annular indentation therein, and around which it is tightened by giving the loop *d*, *d*, on one side, and the free ends on the opposite side of the bottle an extra twist. The loop end is then turned downwards and the free ends being further twisted together are also bent downwards and passed round the neck of the bottle in opposite directions, and are passed respectively through the loop and thence to the opposite side of the neck of the bottle, when they are twisted together under the flange (see Figure 1) and the fastening is complete.

Figures 7, 8, 9, shew another mode of fastening the cap, which is made with an indentation *g*, *g*, at the top, over which is passed a clip *h*, *h*, formed with claws *i*, *i*, at the bottom for securing it to the flange *f* (see Figure 9).

Figures 10 and 11 are intended to illustrate another mode of securing the cap by means of clips *i*, *i*, fitted to the cap or forming an integral part thereof and being self securing, when formed as shewn at Figure 10, or by the addition of a wire binder passing through eyes as shewn at Figure 11.

Drawing No. 3.—This Drawing is intended to illustrate various modifications of the self-securing clip fastening and cork screwing cap. The clip fastenings in this case consists of two rigid pieces of strong steel or other wire (see Figure 1) which is first bent at the ends, as shewn at Figure 2, then formed into a staple as shewn at Figures 3 and 4 in side and end views with side limbs a^1 and a^2, and a head a^3, which head is also bent or cranked as shewn at Figures 5, 6, and 7. This part of the clip I denominate the female. The mode of forming the male is illustrated at Figure 8 in which *b* is the limb and *c* is the hook for connecting it with the angle or crank of the female.

Figures 9 and 10 show the cork screwing cap formed with holes *c*, *c*, through which the limbs of the male and female are passed as shewn at Figures 13 and 14. In this case the pressure of the cork against the under side of the heads of the clips causes them to incline inwards under the flange of the neck of the bottle, and the greater the pressure exerted by the cork the greater will be the holding power of the clips.

Figures 11 and 12 are intended to illustrate the mode of forming and applying similar clips fitted to the cap or forming an integral part thereof; in this case the limbs a^1, a^2, and *b* are formed with a considerable amount of spring for increasing their holding power.

Figures 16 and 17 shew the clips and cap with an addition at the end of the male limb for releasing the clip. For this purpose the eye b^1 is supplied with a pull for disengaging it from the flange when the two other clips a^1 and a^2, will also immediately free themselves from the bottle and release the cork. Figure 18 shews this clip applied for securing the cork without the cap. Figure 19 shews the cap formed with a male limb as an integral part thereof, the female clip only being required to be fitted thereto. Figures 20 and 21 shew the mode of fitting and securing the cap *d* by means of a wire binder *b* which is passed through the holes *c*, *c*, in the cap, the ends *g* and *h* being finally fastened together under the flange of the bottle. Figure 22 shews another form of clip and cap in which the limbs *a*, *a*, and *b* are simply hooked to the cap *d* at *c*, *c*.

Drawing No. 4.—Figures 1, 2, 3, 4, and 5 shew several modifications of the wire clip fastening before described when formed with the addition for the pull *b*. In some cases I make this pull of sufficient length either to pass round the neck of the bottle or down the side to the bottom, and be fitted with hooks *d*, *d*, (see Figure 3) for securing it in either case. In other cases I make one limb of sufficient length itself to pass down the side of the bottle and clip the bottom, either with a single clip as shewn at Figure 4, or with a double clip as shewn at Figure 5. The pull *c* for releasing being then fitted at the bottom of the elongated limb. Figure 6 shews another modification of the wire clip which may consist of a simple staple and be passed over or through the cork. The lower ends of the limbs *a*, *a*, being formed as here shewn and secured under the flange by means of a binder (see Figure 8) or made with a considerable amount of spring and formed and fitted with a pull *c*, attached at *b* as shewn at Figure 7. When desired the pull may be made to terminate or be fitted with a lever or pin of an ornamental or other design; and which may be made to serve the purpose of

a trade mark or label as its secondary object; its primary use being that of a pointed lever for being inserted between the neck of the bottle and the limb of the clip for releasing the clip from the flange, and to be used for that purpose instead of the pull. I also propose to form a screw cork or stopper fitted with any of the clip securing media herein-before described. In such cases the clips being passed over and pressed under the flange, the cork or stopper is inserted and secured in or released from the mouth of the bottle by turning the screw, which may be fitted with a milled head, lever, or any other suitable appliance therefor.

In witness whereof, I, the said Percy Smith, have hereunto set my hand and seal, the Twenty-fourth day of December, One thousand eight hundred and sixty-seven.

PERCY SMITH. (L.S.)

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1867.

A.D. 1867, JUNE 29, N° 1899,
SMITH'S SPECIFICATION.

(4 SHEETS)
DRAWING N°1.

FIG. 3.

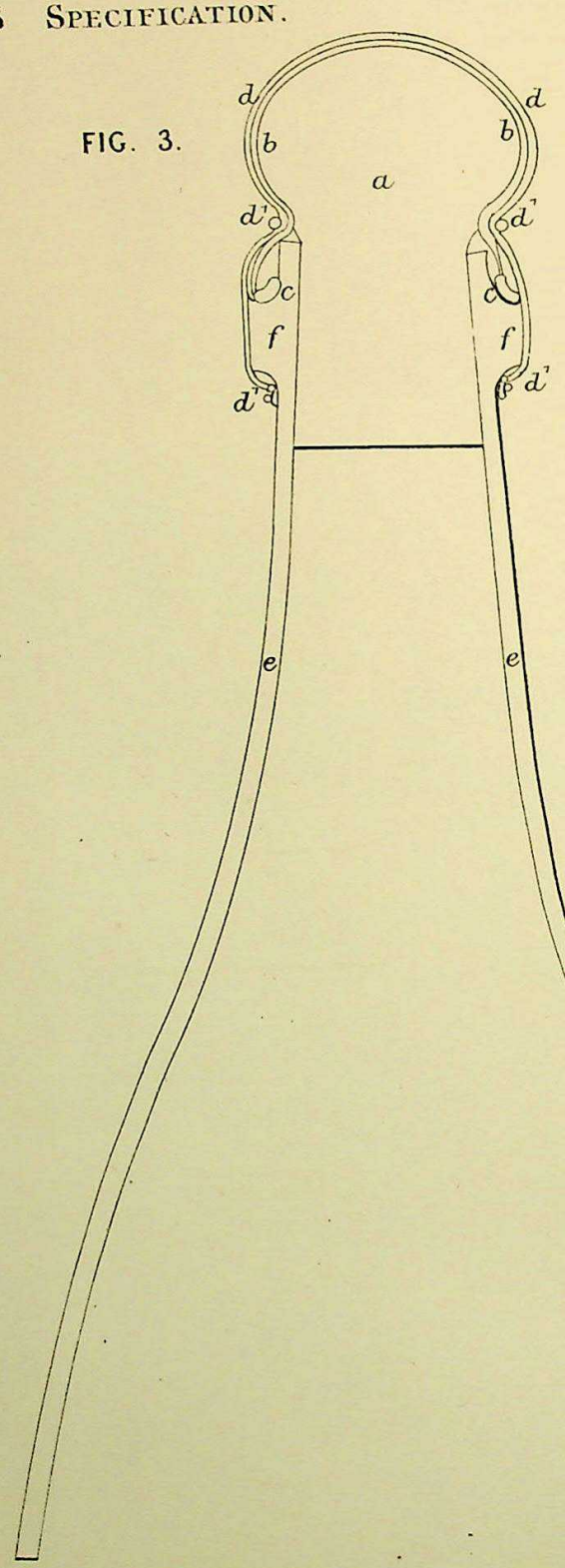


FIG. 1.

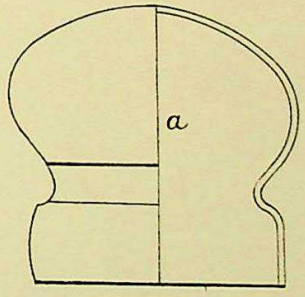
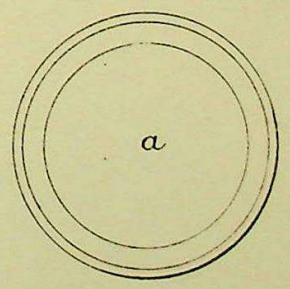


FIG. 2.



The filed drawing is partly colored

Drawn on Stone by Malby & Sons.

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Printers to the Queen's most Excellent Majesty. 1867

FIG. 2.

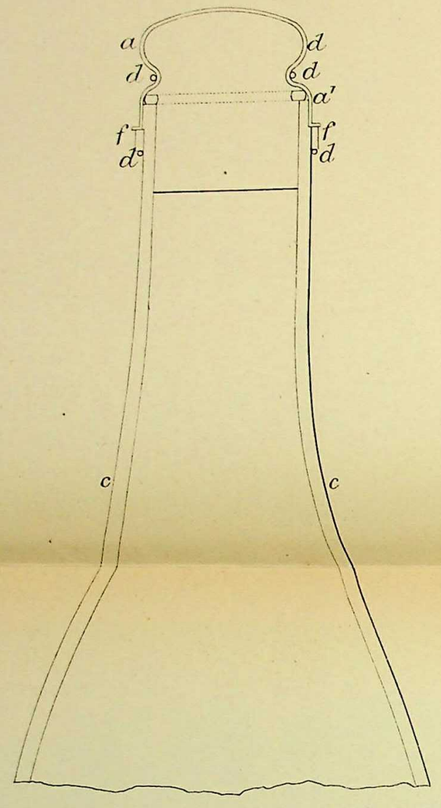


FIG. 3.

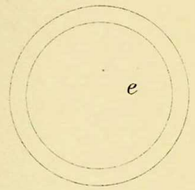


FIG. 4.

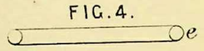


FIG. 5.

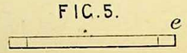


FIG. 1.

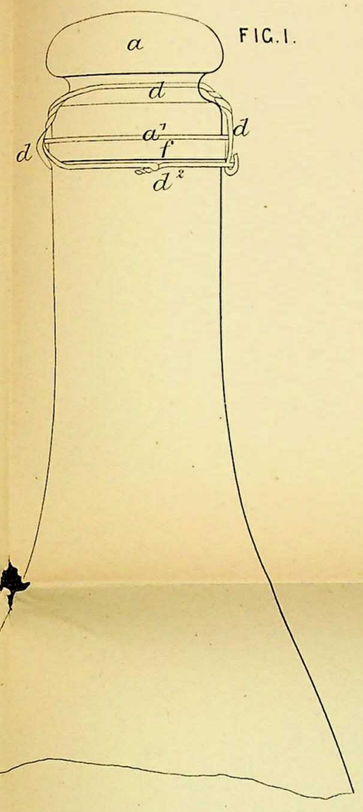


FIG. 9.

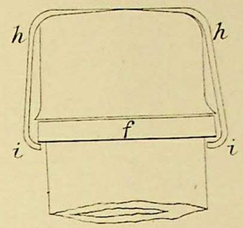


FIG. 7.

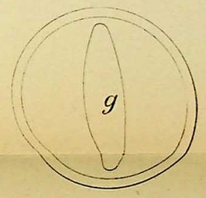


FIG. 8.

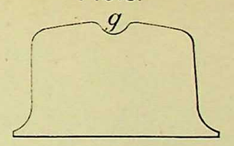


FIG. 6.

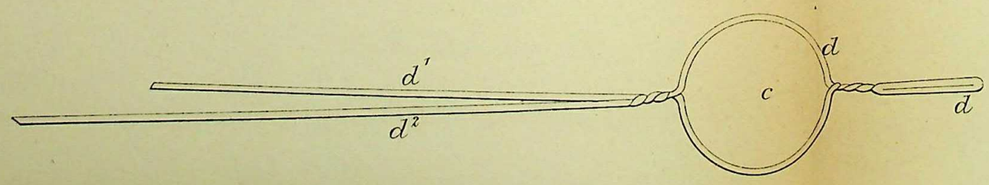


FIG. 10.

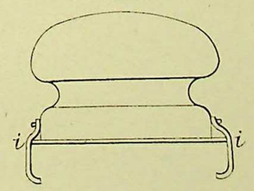
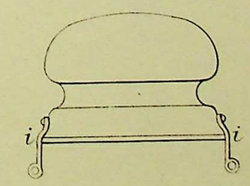


FIG. 11.



The filed drawing is partly colored.

Drawn on Stone by Malby & Sons.

London: Printed by George Edward Eyre and William Spottiswoode,
Printers to the Queen's most Excellent Majesty. 1867

A.D. 1867. June 29. № 1899.
SMITH'S Specification.

4 SHEETS
DRAWING № 3.

FIG. 1.

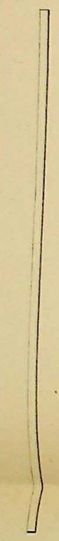


FIG. 2.

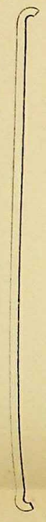


FIG. 9.

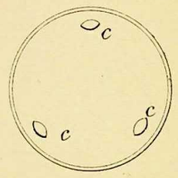


FIG. 10.

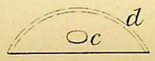


FIG. 12.

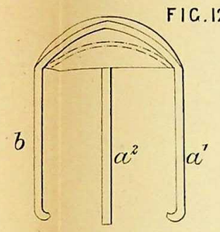


FIG. 11.

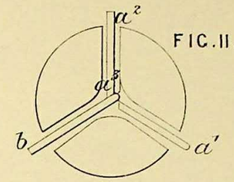


FIG. 16.

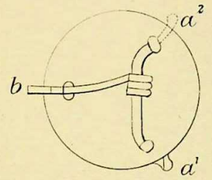
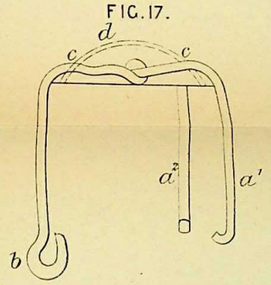


FIG. 17.



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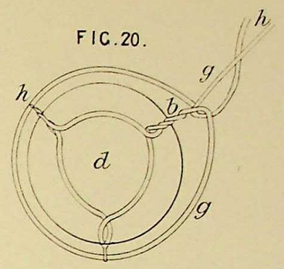

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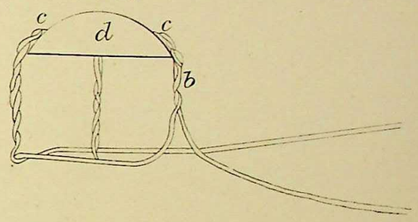

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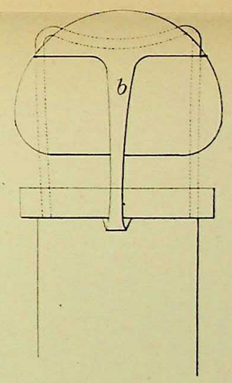
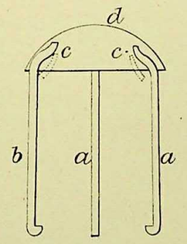


FIG. 22.



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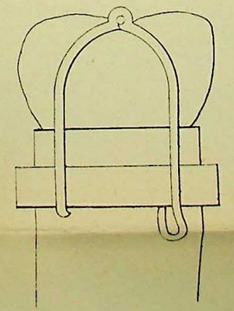


FIG. 15.

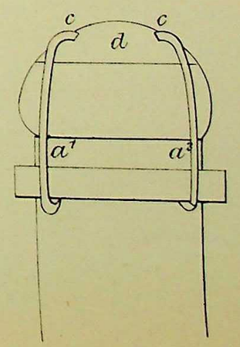


FIG. 7.

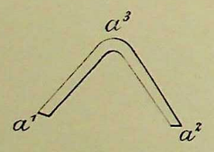


FIG. 3.

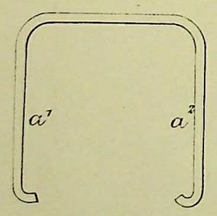


FIG. 4.

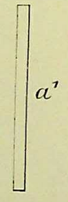


FIG. 13.

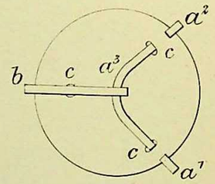


FIG. 8.

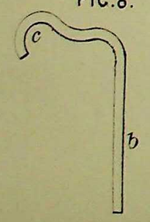


FIG. 5.

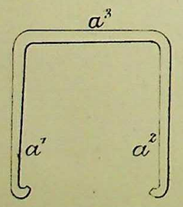


FIG. 6.

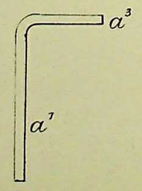
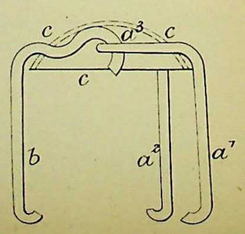


FIG. 14.



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DRAWING Nº 4

FIG. 1.

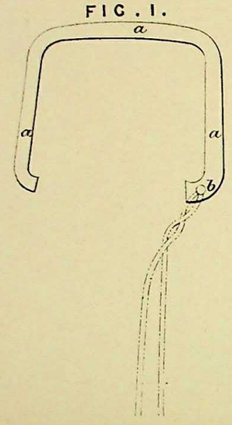


FIG. 2.

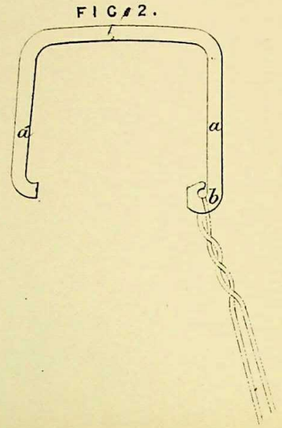


FIG. 3.

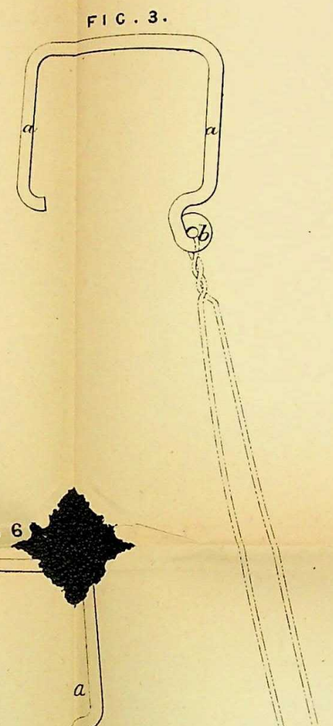


FIG. 4.

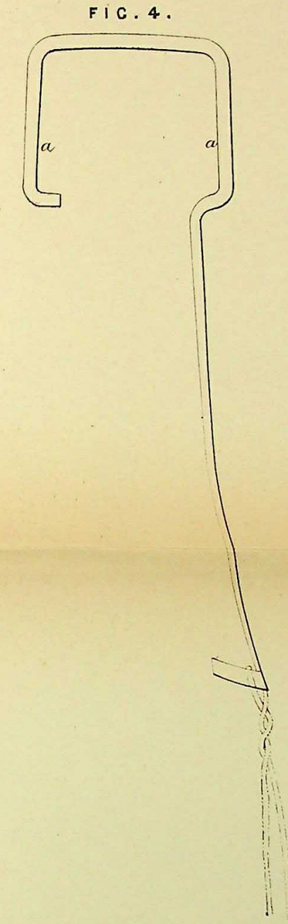


FIG. 15.

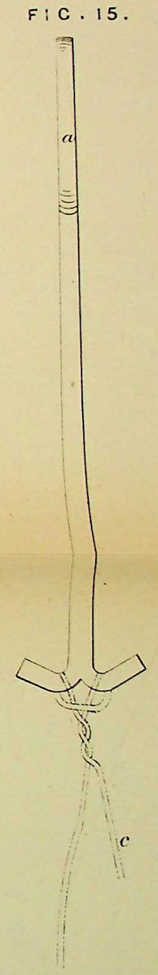
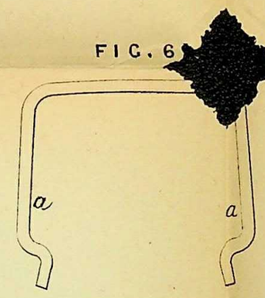


FIG. 6.



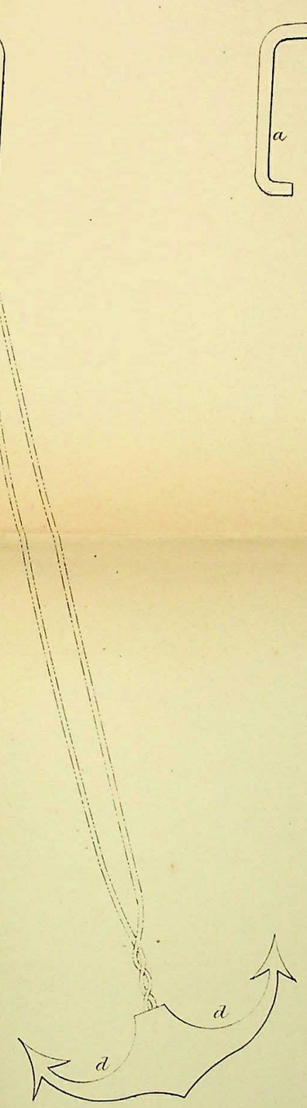


FIG. 7.

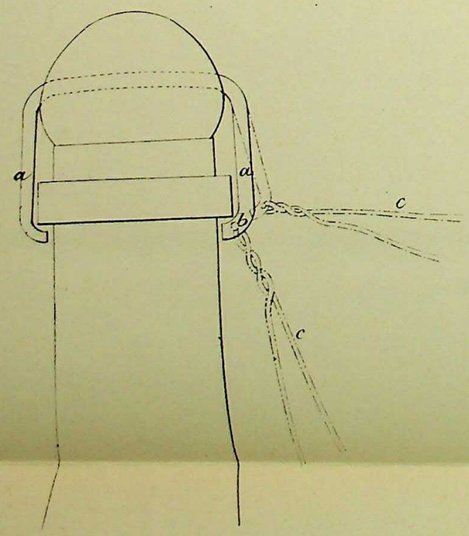
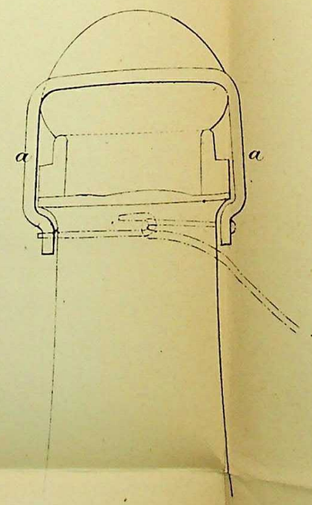


FIG. 8.



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